

ABSTRACT OF DISCLOSURE

A pump or DC fan used to cool an electronic system is monitored for speed.

When the pump or fan encounters an unexpected increase in impedance, such as an obstruction or a bearing anomaly, the controller temporarily increases the power to the pump or fan to overcome the impedance, and optionally notifies the user of the pump or fan problem. Also, when the pump or fan impedance returns to a normal range, the controller returns the power to the pump or fan to normal levels. In some embodiments, the controller may supply more power to the pump or fan than specified by the manufacturer to temporarily overcome the increased impedance or pending failure of the pump or fan. This increased power allows the fan or pump to operate at a speed necessary for cooling an electronic system during a temporary increase in impedance, or during a slow degradation of the efficiency of the fan or pump.